1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6

used for bowls or mortars. Wood and coconut shell vessels were carved with the types of design shown in the accompanying sketches (fig. 9, *b* and *c*.) Drinking cups for water and kava were of coconut shell. Small food bowls were called generically *ipu* or *kipu*, different sizes and forms having many specific names. Large quantities of *popoi* for feasts were put in very large round bowls (*toto*) (fig. 10, *a*) of *temanu* wood, some of them four feet in diameter, or in long, canoe-shaped troughs. Between the very large bowls and the small ones, there ranged all sizes. Knoblike handles, carved from human bone or made of a large smooth nut, were attached to the sides of the bowls with sennit cords passed through holes in the bowl (fig. 10, *b*). For kava there were two types of containers (*tahaha, tanoa,* or *kotue)* used, one like an elongated scoop with a pointed end from which the *kava* was poured (fig. 10, *c*), the other roughly copying the form of a bird and having a lid. (See fig. 10, *d*.) Small containers (*hue*) with covers *(tifa)* were made of large coconut shells and gourds *(hue mao'i)* and suspended on the beams of the house by means of small nets woven around the body of the vessel (fig. 10, *e*). Water was kept in large gourds *(hue)* or large bamboos *(kohe)*, the joints of which, with the exception of the one at the bottom, had been rammed through on the inside. Graters for coconut *(feke)* were made by lashing to a stick supported on legs, a piece of pearl shell, one edge of which was chipped or filed into small saw-teeth (fig. 10, *f*). Another type of grater (*iku*), made of the tail of the ray fish, was used for grating amomum root *(ena)*. According to Mr. Linton, sharks' fins were also used for graters. Strips of bamboo, sharks' teeth, and shells were used for knives *(kohe)*. Besides these implements and utensils used in connection with cooking and eating, small nets, fishing rods, and the like were hung under the roof and on the beams and posts of the cook house. A pointed stick *(ko)*, set in the ground, served to husk coconuts.

The Sacred Place

The family sacred place was either a small *tapu* enclosure or a small, high platform (the *taha tupapa'u)* in which or on which temporary houses and shrines or altars were erected in connection with birth and death ceremonial. These were always in close proximity to the sleeping house, and hence were an integral part of the establishment. On Hiva Oa, there was a shed on a small but high, stone platform *(taha tupapa'u)*, but on Nuku Hiva the enclosed place with a temporary shed appears to have been common. At times of ritual, such as the treatment of a dead body, or the erection of the temporary altars in honor of children, these temporary sheds were decorated with cloth as a sign of *tapu*. Images were

1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6

252 what as skate, though it can only be kept one day. It is cut into cubes, salted, saturated with lime juice, tied up in fau leaves, and kept until the next day, when it is a gluey mass. This is quite palatable.

Various sea-birds—the *tara*, the *noio*, the *ka*, the *upe* (large wild pigeon), the *keuhe* (snipe)—are braised, being speared on a slender stick, after plucking, and turned as on a spit over charcoals. In modern times chickens (*moa*) are boiled in coconut milk or fried, but it seems doubtful that they were eaten in the old days. On Hiva Oa, the natives say that chickens belonged to the priests, and were never eaten. Langsdorff (18, p. 176) says that poultry were not much in request for food, their plumage only being desired.

[237]

Pig (*pua'a, puaka*) is, of course, the staple meat, the principal dish at all feasts and saved for special occasions even in ancient times, as Porter testified (24, p. 113).

> For although the island abounds in hogs, the natives seldom kill them for the use of their families, but keep them for their feasts, and, on such occasions, they will frequently kill five or six hundred at a time. If a relation die, they have a feast on the occasion, and they will save their hogs for years, in order to make their feast abundant, in which consists its chief splendour.

[231] The same writer says that they castrate the boars to improve their size (24, p. 91). Pigs are not stuck, but are hung and strangled so that the blood remains in the animals. A small slit is made in the stomach, just large enough to insert the hand and pull out the bowels, the liver and lights being left in. The bowels are washed, rubbed on stones in the river, turned wrong-side out on a small stick, and cleaned. These are baked separately and eaten with *popoi*. If the pig is sufficiently large a few hot stones are placed in it (on Nuku Hiva though not on Hiva Oa) to aid the cooking, and it is placed on leaves (8) in the oven on its stomach—not on its back as is the Tahitian custom—the hot stones having been covered with *kokuu* leaves, guava sticks, and a layer of earth to keep the animal from burning or baking too hard. Melville (23, p. 187) describes the process as follows:

[184]

> Having got thus far in the matter, the body was removed to a little distance; and, being disembowelled, the entrails were laid aside as choice parts, and the whole carcass thoroughly washed with water. An ample thick green cloth, composed of the long thick leaves of a species of palm-tree, ingeniously tacked together with little pins of bamboo, was now spread upon the ground, in which the body being carefully rolled it was borne to an oven previously prepared to receive it. Here it was at once laid upon the heated stones at the bottom, and covered with thick layers of leaves, the whole being quickly hidden from sight by a mound of earth raised over it.

252 621 It is commonly said in Taiohae that the people of Tai-pi living up-valley were not allowed by the hostile lower valley tribe to go down to the

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flowing of the long hair of the ornaments when a man moved gave the effect of swiftness. The hair was usually that of relatives. When *ouoho* were made for a sacred child its *pahupahu* (maternal uncles and paternal aunts), both male and female according to one informant, but only the male *pahupahu* according to another, cut off their hair for the purpose. It was taken to a *tuhuna hana titi ouoho* who wrapped it on small sticks, bound these with leaves and baked the rolls in an oven of heated stones. The curled hair was then attached to a braided band of sennit. When a chief desired *ouoho* for his child his people were called upon to supply it. Hair of enemies was also used. The different ornaments made in this way had particular names. (See fig. 25, *e*.) The *titi ouoho ke'i* was a small skirt of hair worn around the waist. The large neck ornament or ruff was called *titi ouoho* or *taki ouoho*. Where the two ends met on the breast a large whale's tooth was usually suspended. According to a Nuku Hiva informant this neck piece was called *hope moa* and sometimes covered the whole back. Dordillon (9) gives *titi hope* as meaning a hair ornament worn on the back, and he gives as the meaning of *hope moa*, a hair ornament worn around the waist. The wristlets were called *moputu ouoho, papatu ouoho, tope pu,* or *'poe ima. Poe ouoho* were the small anklets of hair—these anklets were frequently made of black feathers instead of hair, and were then called *poe hu'u manu*. A generic term for these ankle ornaments was *poe vaevae*. Dordillon (8) gives *toke ouoho* as meaning a hair ornament for the loins; and distinguishes *taki ouoho* for the neck, and *titi ouoho* for the shoulders.

HEADRESSES

The word *pa'e* was a generic term applied to head coverings and headdress. Elaborate headdresses were made by *tuhuna* who specialized in the art and were paid for their work in pigs.

The *pa'e kea* (see fig. 24, *d*) was the typical festival headdress of Hiva Oa and was peculiar to that island. It was a crown made of elaborate plaques of white shell and carved tortoise-shell (*kea, tortoise*) bound on a band of closely woven sennit which was decorated with buttons and small plaques of pearl shells with a superimposed tortoise-shell carving. *Pa'e kaha* was the Nuku Hiva name for this crown. It is said that one of these could not be paid for with land because it was worn on the head and was therefore *tapu*: the land which was given in payment for *pa'e kea* would be likely to be trod upon by a woman, in which case the head wearing the *pa'e kea* would receive the insult. Fine *pa'e kea* were considered family rather than individual possessions, were passed on from generation to generation, and worn by different members of the family.

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292 237 The headdress typical of Nuku Hiva was the *pa'e ku'a* (fig. 24, *e*) headdress, made of green and red feathers attached to a coconut sheath and bark cloth background. It must have been very rare at all times as there is no description of it by early visitors so far as I know, and as it appears to be rare as a museum specimen. There is conflicting evidence regarding the feathers used on this ornament. Dordillon (8) speaks of its being made of feathers of the dove (*kuku*)—the green feathers are undoubtedly those of the dove. The red feathers may be those from the heads of a certain variety of the dove, but informants on Nuku Hiva claim that the red feathers came from the bird called the *manu ku'a*, which lived formerly on the high desert-land of western Nuku Hiva, but which is now extinct. On Hiva Oa it is believed that voyages were made to A'o Tona (Rarotonga) for the sake of getting feathers of the *manu ku'a*. One informant on Nuku Hiva insisted that the *pa'e ku'a* was worn on the chest and not on the head, but this seems doubtful on account of the name. This headdress seems to have been typical of Nuku Hiva, where it was worn both by chiefs and chiefesses, but it was known on Hiva Oa. Informants from Hiva Oa described the *pa'e ku'a* to me as a headdress made of red cock's plumes.

The *peue ei, peue taki ei, or peue koio* (fig. 23, *b*) was a crown made of porpoise-teeth attached to a band of closely woven sennit, the attachments being ornamented with beads. This headdress was the product of the island of Ua Pou, where many porpoises were caught. (See Fishing.) It was an article of trade for that island with Tahu Ata and Hiva Oa. Dordillon (8) defines *peue* as a head ornament made of feathers in the form of a vizor.

292 The *hei ku'a* is said to be a headdress, but its form and its name (*hei*) would suggest that it was worn on the breast. The accompanying sketch (fig. 25, *d*) is based on an imperfect specimen of a *hei ku'a* now in the Bishop Museum. Dordillon defines *hei ku'a* as a head ornament made of red plumes. At Pua Ma'u I was told that the inspirational priest there wore the *hei ku'a*, but another informant said that women who danced wore it. At Haka Ui, Nuku Hiva, a good informant said that it was worn on the neck by *tuhuka*. Another head ornament made of long cock's plumes was the *hei mekameka*, or *hei pe'ape'a*.

The *ta'avaha*, sometimes called *vitake* (9), was a headdress consisting of a semicircle of long cock's plumes surmounting a pearl-shell disk. Early writers describe these as being worn by warriors on Nuku Hiva and on Tahu Ata, and modern informants on Hiva Oa say they were also worn there. One made of the white feathers of the tropic bird was described to

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Mrs. Handy on Hiva Oa. Stewart gives an excellent description of this headdress. (See Descriptions of Dress by Early Writers and The Warrior's Dress). 292

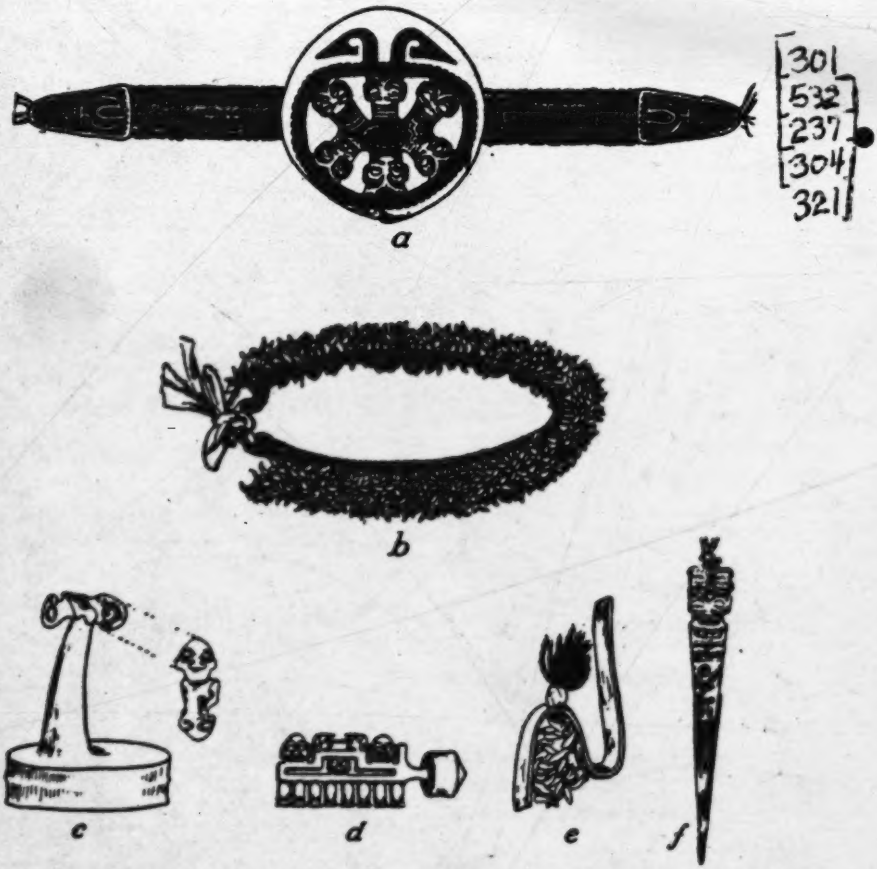

FIGURE 23.—Ornaments for the head and ears: *a*, warrior's headpiece made of shell (*uhikona*); *b*, woman's porpoise-tooth headdress (*peue ei*); *c*, ear ornament made of whale's tooth (*kakahai*); *d*, ear ornament carved of human bone (*taiona*); *e*, woman's tortoise shell ear ornament; *f*, carved ear-piercer.

The *uhi kana* was a large pearl-shell held in place over the forehead by a woven sennit head band. On the pearl-shell was an appliqued tortoise-shell design (fig. 23, *a*).

5: Porter T-5 (1812-1814)1823
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will, however, do justice to the discovery of Mr. Ingraham, and whatever names may be given to them by English or French partizans, posterity will probably know them only as Washington's Group.

On the morning of the 24th, discovered the island of Rooahooga (so called by the natives, but by us Adams' Island) one of the Washington Group. Its aspect, on first making it, was little better than the barren and desolate islands we had been so long among. But on our nearer approach, the fertile vallies, whose beauties were heightened by the pleasant streams and clusters of houses, and groups of natives on the hills inviting us to land, produced a contrast much to the advantage of the islands we were now about visiting. Indeed, the extreme fertility of the soil, as it appeared to us after rounding the S. E. point of the island, produced sensations we had been little accustomed to, and made us long for the fruits with which the trees appeared every where loaded.

On rounding the S. E. part of the island, we saw a canoe coming off to the ship with eight of the natives, one of whom was seated in the bow, with his head ornamented with some yellow leaves, which at a distance we supposed to be feathers. They approached us very cautiously, and would not venture alongside until we had run very close in. But no persuasions of ours could induce them to come on board, although we offered them pieces of iron hoops, knives, fish-hooks, and other articles which we supposed them to hold in the highest estimation. We had a native of the island of Otaheita on board, who enabled them, but with apparent difficulty, to comprehend our wishes, and who gave them repeated assurances of our friendly disposition. They came under the stern, and after we had sent down to them, in a bucket made fast to a rope, several of the above articles, they sent up to us, by the same conveyance, a few fish and a part of their ornaments, consisting of a belt made of the fibres of the cocoa-nut, garnished with the small teeth of a hog, the only articles of exchange in their possession. They frequently repeated to us the word *toya*, which signifies friend, and invited us to the shore, where they assured us, by the most expressive gesticulations, that we should be made welcome. I was anxious to procure some refreshments, but more so to obtain a knowledge of a people with whom the world is so little acquainted. One of the canoes displayed a white flag: I caused a similar emblem of peace to be exhibited, and after waiting some time, perceiving that they were fearful of coming along side, I caused two boats to be manned and armed, and proceeded towards them. I soon approached them, and directed the Otaheitan to inform them that we were friendly disposed, and were willing to purchase of

5: Porter T-5 (1812-1814)1823
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is more to the right, and, as I before observed, lower down. I had no sooner understood that they had a chief, to whom I could address myself, than I felt anxious to see him. A messenger was therefore dispatched for him; and after collecting my people, I returned on board, where shortly after our arrival, I soon found every person anxious for the ships to be got into port and secured.

When the ships were moored, the shore was lined with the natives of both sexes; but the females were most numerous, waving their white cloaks or *cahoes* for us to come on shore. Many applications were made for me to permit them to accept the invitations, and I found it impossible any longer to resist. The boats were got out, and proceeded to the shore, where, on landing they were taken complete possession of, by the women, who insisted on going to the ship, and in a short time she was completely filled by them, of all ages and descriptions, from the age of sixty years, to that of ten; some as remarkable for their beauty, as others for their ugliness. They all appeared to be of the most common kind, and many of them who had been in the habit of visiting ships, which had formerly been at this place, had been taught by the seamen, some few English words, which they pronounced too plain to be misunderstood.

No jewel, however valuable, is half so much esteemed in Europe or America, as is a whale's tooth here. I have seen them by fits laugh and cry for joy, at the possession of one of these darling treasures. Ivory, however finely wrought and beautiful in its kind, bears no comparison in their estimation. Ivory is worn by the lower and poorer classes, made into the form of whales' teeth, and as ear ornaments, while the whales' teeth are worn only by persons of rank and wealth. Some idea may be formed of the value in which they are held by the natives, when it is known that a ship of three hundred tons burthen, may be loaded with sandal-wood at this island, at the price of ten whales' teeth of a large size. For these the natives will cut it, bring it from the distant mountains, and take it on board the ship. This cargo in China, would be worth near a million of dollars. I have seen this sandal-wood, that is so highly esteemed by the Chinese; (indeed their infatuation for it, falls little short of the natives for whales' teeth) it does not appear capable of receiving a high polish, nor is its colour agreeable. The odour arising from it is pleasant, and the principal uses to which the Chinese are said to apply it, is to burn it in their temples, and to extract from it an oil, which they consider of great value.

I was informed that Gattanewa had arrived, and to show my respect for the chieftain, as well as to convince him of my friendly disposition, I sent him on shore a fine English sow; this being, as I was informed, the most acceptable present I could make him,

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

396 practise, which involved much unnecessary labor, is given by Porter (49, pp. 101-
501 102). He says:

[422] Each piece, and indeed each paddle has its separate proprietor. To one belongs the piece projecting from the stern, to another the part forming the bow. The pieces forming the sides belong to different persons and when a canoe is taken to pieces, the whole is scattered throughout the valley and divided, perhaps, among twenty families. Each has the right of disposing of the part belonging to him, and when it is to be set up each brings his piece with materials for securing it. The setting up of a war canoe goes on with the same order and regularity as all their other operations.

Mention of this curious system of ownership is also made by Desgraz (15, pp. 281-282) but as his book appears to be a little more than a compilation from earlier sources, this can hardly be taken as a verification.

It seems certain that there must have been a definite order in which the various sections were placed in position, but no exact information was obtained on this point. The structure of the canoes, however, partially indicates the following sequence:

The first step must have been to arrange the pads which took the place of caulking between structures or sections. There were four of these, two being placed along the sides of the underbody and one at either end. The side pads consisted of two thick flat ropes, of the same length as the underbody, each of which was plaited from three strands of coconut husk fiber. Cellular tissue of the husk was left adhering to this fiber, probably with the idea of filling the interstices and making the finished seam more nearly water tight. These ropes were laid along either edge of the underbody, being held in position by continuous bark strings which fastened them to the underbody at each lashing hole. The end pads were made from a number of the fiberous leaf sheaths of the coconut which were spread out flat with their upper ends resting on the top of the underbody and their lower ends bending down over its flat vertical bow and stern. They do not seem to have been attached to the underbody in any way.

The next step was to place the bow and stern pieces in position, and then the side planks. Whether the bow and stern pieces were attached before the side planks were put on is uncertain, but it seems probable that the whole superstructure was lashed to the underbody in a single continuous operation. In the models the lashing of each side is done with a single continuous line, beginning at the bow.

[284] The lashings were of broad three-plait coconut fiber cord considerably heavier than that used for house lashings. This was passed several times through the upper and lower lashing holes, outside of the strips, the outer side of the lashing being flat, the full width of the hole, and only one cord thick. According to one informant a large wooden needle, with the point barbed on one side was used to facilitate passing the cord in and out. (See section on Miscellaneous Tools.) The upper ends of the side planks were attached to the bow and stern pieces by small lashings, each of a single piece of cord tied on the inside. The inside lashings are said to have been ornamented on some canoes with designs derived from string figures.

CAULKING

501
396 The lashings of the underbody and superstructure did not completely fill the
314 triangular holes provided for them, and the openings were caulked with pieces of coconut husk wadded up and beaten in with a wooden mallet and pointed stick. (See
● [237] section on Miscellaneous Tools.) The seams at the ends of the canoe were calked with feathers, beaten in. [48]

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The longitudinal strips covering the outside seams of the canoe were painted black and ornamented at each lashing by tufts of white feathers of the *tevake* bird. The feathers were placed on the stern side of each lashing, and were held in place by the two or three rearmost loops, their inner ends resting directly upon the strip.

The temporary decorations in most general use consisted of coconut fronds which were placed along the sides of the bow and stern platforms with their lower edges trailing in the water. According to one informant they were also placed along the sides of the canoe, but no mention of this is made by early writers. Stewart (59, p. 244) says that in the large canoe seen by him "between the figure head and the bow, three green coconut leaves, four or five feet high, were fastened erectly." Porter (49, p. 102) says: "The seat of the coxswain is highly ornamented with palm leaves and white cloth."

Porter (op. cit.) says that the bow was ornamented with pearl shells strung on coconut branches.

Two cords were run from the rear corners of the stern platform to the tip of the stern piece, these cords being decorated with tufts of human hair and *pava-hina* (ornaments made from white beards). These cords are still present in one of the old models, attached to the ends of long poles projecting from the stern platform. It seems probable that long tapa streamers were also attached to the stern piece, as several of the models are decorated in this way.

Stewart (59, p. 327) says: "A skull was lashed on each corner of the platform elevated at the stern." According to an old informant, the bodies of any enemies killed during a raid were laid across the neck of the bow piece during the homeward voyage.

HANDLING OF THE CANOES

According to informants the large war canoes were never sailed, but small canoes and double canoes, made from two craft of this type lashed together, were sometimes sailed. The paddlers sat two on a seat and paddled rhythmically, usually chanting in time to the strokes. The steersman sat on the raised stern platform, using a long paddle of ordinary Marquesan form. According to one informant there were two steersmen, one on either side. Porter (49, p. 102) says of these craft: "They are not so fleet as might be expected, as our whale boats could beat them with great ease," and all the early accounts agree that they were rather poorly handled.

SPECIAL TYPES OF CANOES

Mention has been made of double canoes, but according to all the information obtained by the author these were simply canoes of the built up type which

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MISCELLANEOUS TOOLS

Quiros (51) says that the Marquesans used adzes made from thick fish bones or shells. This is the only evidence of the occurrence of these implements in the Marquesas and as no examples are known, it seems probable that Quiros confused the Marquesas with some of the low coral islands visited on the same voyage. 412 321

Sharks' teeth, hafted in various ways, were formerly used as knives and carving tools, but no specimens seem to have survived and the methods of hafting have been forgotten by the present natives. According to Langsdorff (38, p. 175) the teeth from the lower jaw of the shark were used as substitutes for gimlets or awls, being fastened to wooden handles. Sharks' teeth, apparently unhafted, were also used as razors. The hair was gathered in small bunches and the tooth sawn back and forth across it at the roots. [825] [302]

Very few bone tools appear to have been used in the Marquesas. Fleurieu (23, p. 135) mentions the use of bone awls. Narrow wedge-like implements of bone or hard wood were used to pound the feather caulking into the bow and stern seams of canoes. Bone knives are described on page 351.

A number of shell implements appear to have been employed in wood carving, although we have no information as to their form. The grooves in *toa* wood tapa beaters are said to have been cut with pearl shells ground to a keen edge, and the handles were shaped with a small black shell, called *mama*. Fleurieu (23, p. 135) says that the Marquesans used "pieces of shell of different shapes and sizes, sharp or toothed like a saw." Knives made from whole pearl shells ground to a sharp edge were used for a number of purposes. There appears to have been no clear distinction between these and the shell scrapers used in tapa making.

Rasps made from the skin of the shark or giant ray were used in shaping clubs and other objects made from the hard *toa* wood. They were made by wrapping the skin around a smooth stick while it was wet and soft. One end of the stick projected a few inches beyond the skin, forming the handle. (See Pl. LVI, *A*.) Fine shark skin, apparently not mounted, was used in polishing bowls and other wooden objects. Sections from the tail of the giant ray were also used as rasps, requiring no preparation other than drying. These tail rasps have continued in use until modern times for the grating of sandal wood, although recently they have been supplanted by files. The spines of the sting ray are said to have been hafted and used as saws. 412 322 237

Chisels edged with rats' teeth were formerly used by expert Marquesan artisans in the carving of hard stone. None of these implements have survived, 412 324 [237]

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The outer end of the fan, which was similar in shape to the coconut fans just described, was finished with a straight band twilled over three and under three. The body of the fan was also twilled, but the weft strands passed under one and over two. The warp strands radiated from the outer end, those next the handle being vertical and parallel while those of the wings diverged more and more as the tips were approached. The exact method of finishing the edges could not be determined. The upper end of the handle was provided with a long spike which was incorporated into the fan, the weft threads being interwoven about it. Near its base it was encircled by ornamental lashings of fine sennit laid on in a simple diamond pattern. The strips used in the woven part of the fan were one-eighth of an inch or less in width. The lower end of the handle might be either a continuation of the wooden spike or a separate piece of human bone or whale ivory. In most cases it was elaborately carved with four small tiki figures arranged in two pairs, superposed upon one another, the figures of each pair being back to back. These fan handles rank among the finest products of the Marquesan artist and it would be difficult for Europeans to better some of them either in design or execution. The woven portion of the fan was whitened by rubbing with lime or with a white clay found in Nuku Hiva, the application being heavy enough in many cases to fill the interstices of the weaving and make determination of the technique and material difficult. The material appears to have usually been the young leaflets of the cocoanut palm, but it is possible that pandanus was also used in a few instances. 293

These elaborate fans were made by special *tuhuna* and seem to have had a distinct ceremonial significance, being carried by chiefesses at *koina*, and by chiefs and *ta'ua*. Those of chiefesses at least were inherited in the female line, and appear to have been almost insignia of rank.

It seems well to describe here a very curious fan of tortoise shell, collected in Atu Ona, Hiva Oa. (See Pl. LXVII, *C*.) [237]

The fan consists of a rather rough wooden handle to which plates of tortoise shell have been attached. The object is in bad condition, but the original shape appears to have been rectangular. The handle is decorated with a few tresses of human hair tied with cocoanut fiber, like those used in hair ornaments. Fans of this sort are said to have been used to keep flies off a dead body while it was undergoing mummification. The specimen obtained had been partially cut up for the sake of the tortoise shell, a good indication that these objects had no religious significance.

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

by a single horizontal or vertical hole. The square end has along either side two to six notches which are used to facilitate tight lashing of the bone barb. In the specimens examined there was also a short longitudinal groove in the center of the lower surface which served no practical purpose. The point of the hook is of bone, with a slight but well marked barb just behind the tip on the lower side. The modern Tahitian and Tuamotuan hooks of the same type are usually barbless. The base of the bone point is pierced with two holes. The point is attached to the strip by close lashings, formerly of coconut fiber cord. The ends of the lashings are gathered together into a single strand at the forward end of the bone point and carried along the upper surface of the strip to its pointed end, where they are again attached to it by lashings passed through the hole in the strip. The strand is continued beyond the hook and serves to attach the whole to the line. As the lashings at the inner end of the hook are loose enough to allow some play, the pull of the line comes directly at the base of the bone point. When a fish strikes, the pull is said to draw the point slightly downward and inward, making escape more difficult. This movement, if it occurs at all, is negligible, but the pull coming at this point does serve to tighten the lashings and prevent the point from slipping on the strip. The bark upon the point is of little value, and unless a tight line is kept the fish will escape. 227

In some hooks of this type a small bunch of pig's hair is tied transversely at the rear end of the strip as an additional lure but this is not a constant feature (Pl. LXXI, *B*, 1). In one specimen collected an additional strip of shell is tied to the upper side of the main strip, probably with the idea of strengthening and weighting the hook. [23]

That sinkers were employed in line fishing is shown by two terms given by Dordillon (17): *pokau*, which is defined as a sinker, and *pokoc*, which is defined as a stone twisted with a fish hook which falls off when the hook sinks to the depths. It seems probable that such sinkers were unworked pebbles.

Dordillon also gives a term (*pe'ctai*) which he translates as "to fish with a line while swimming" but this method is now obsolete and no information was obtained in regard to it.

NETS

Net fishing was probably the most important of the Marquesan methods of fishing, and a considerable variety of nets were employed. Very few of these nets have been preserved in collections, however. The only specimens studied were two imperfect fragments in the Bishop Museum. One of these fragments evidently formed part of a small net in the form of a flat pouch or envelope with square corners. (Pl. LXXI, *C*). 227 286

The net is woven of two-strand fau bark cord hardly more than 1/32 of an inch in diameter with a very small mesh decreasing in size from 3/8 of an inch at the bottom to 3/16 of an inch at the top. The upper edge is finished with a single strand of twisted fau bark cord about three times as heavy as that forming the body of the net. Immediately below this edging a second cord of the same weight runs around the net, apparently serving as a drawstring. The second fragment is so badly torn that the original form of the net cannot be determined. It is woven of extremely fine two-strand pineapple fiber cord scarcely heavier than carpet thread, with a uniform mesh of 5/8 of an inch. The form of knot employed in both nets may be seen from the accompanying drawing (fig. 11).

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534 [531] the diameter seems to have been uniform. The bodies of at least 90 per cent of the drums were decorated with a series of shallow horizontal grooves, apparently made with an adz. In a few drums the upper part of the body was decorated with simple angular-geometric designs of the sort used on house posts. It is possible that the bodies of some of the temple drums were smoothly finished. The lip of the drum was somewhat recurved, as in round bowls of normal type, the greatest width of the interior being one to two inches below the rim. The bottom of the excavation was bluntly conical. The thickness of the walls varied in different specimens but rarely, if ever, exceeded one inch.

The body and base of the drum were hewn in one piece. The interior of the base was cut away and its sides were pierced at intervals so that the body seemed to rest upon six to eight thin, flat legs connected at the bottom by a broad ring. The ring was commonly decorated [531] with a few broad shallow horizontal grooves. As a rule, the legs of the drum were smoothly finished, but a few seem to have been decorated with simple angular designs. Through the top center of each leg two holes were pierced, one above the other, for the attachment of the hoop lashings. In drums of ordinary size the base was wider than the body and tapered inward toward its top, but in the temple drums the diameter of base and body seems to have been uniform.

A wooden hoop made of a split withe encircled the base of the drum just below its juncture with the body. It was attached to the drum by means of ornamental lashings of small [531] sennit, which were passed through the holes and around the sides of the legs. In all the drums seen natural color sennit was employed and the design was a simple diamond. In one specimen tufts of human hair had apparently been laid upon the outside of the hoop before the lashings were put on.

534 264 [257] The drumhead was made of thin shark skin, put on wet. In the edges of the skin, which extended for some distance down the sides of the drum, vertical slits were cut at regular intervals. A heavy cord of flat braided sennit was passed several times around the drum, threaded in and out through the slits in the skin. This lashing was so arranged that there was always an equal number of strands inside and outside. Thus, if we designate four successive slits in the skin as A, B, C, and D, the cord on the first circuit would lie outside between A and B, inside, against the wood, between B and C, and outside again between C and D. On the second circuit it would lie inside between A and B, outside between B and C, and inside again between C and D. In this way a ring of sennit was formed around the lower edge of the head. The arrangement of the lashings connecting this ring with the wooden hoop on the base of the drum is clearly shown on Plate LXXII, *A*. The lashings consisted of a series of loops of heavy sennit cord. The upper ends of the cord passed under the outer lashings of the ring on the outer sides of each pair of slits. The cords forming the outer sides of adjoining loops thus crossed each other at the slits and were carried down nearly parallel. For approximately the lower third of their length the cords were united into a single strand by wrappings of sennit. According to one informant, carved tubes of human bone were sometimes threaded upon the paired cords just above the sennit wrapping. When it was necessary to tighten the lashings these tubes would be forced upwards, drawing the cords together, thus increasing the tension. A different method of tightening the lashings appears to have been employed ordinarily. A number of turns of ribbon-like sennit were wrapped around the body of the drum about midway between the ring and hoop. When these were drawn taut the vertical loops of sennit were forced inward against the body of the drum, tightening the head.

534 Stewart (59, p. 258) says that the small drums used at dances were made of hou wood, and had a small hole in the center of the bottom. He also says (59, p. 257) that the heads of the temple drums were made of ray skin instead of shark skin. No drums with a hole in the bottom were found, but Stewart is a thoroughly trustworthy observer and his statement is sufficient to establish their existence.

Even the large temple drums appear to have been beaten with the hand. Because of their great length they were placed on the ground beside special platforms on which the drummers stood.

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hands separately. These locks were made as follows: A long tress was wrapped at the center with a few turns of fine sennit. It was then doubled back upon itself, and the wrapping continued upward, so that the hair was enclosed in a fiber sleeve about half an inch long. The lock was thus reinforced with sennit at the inner end and terminated in a loop. The separate locks were attached to the band by means of strands of fiber which were separated from one of the cords of the plait, passed through the loop, and twisted into the cord again. The processes of twisting the cords, attaching the locks of hair, and plaiting the band must have been carried on simultaneously, an arrangement which called for a remarkable degree of skill on the part of the workman. 301

Hair ornaments were made by a special *tuhuna*, who also made feather-work. When an ornament was made for a child the hair was donated by its mother's brothers and father's sisters. For a chief's child all the men in the tribe contributed hair. According to Handy, the hair of revenge victims was also used. The hair was curled, apparently after it had been made up into locks, by wrapping it tightly around small sticks, doing these up in green leaves, and baking them in an earth oven.

Hair ornaments were worn by both men and women on festive occasions.

A complete costume consisted of a large shoulder ornament, one or two waist ornaments, bands on the wrists and above the elbow, and bands on the ankles and just below the knee. The shoulder ornament was worn like an European boa, the longest part resting in the middle of the back while the ends were tied together on the breast and held down by a whale's tooth or other ornament. The waist pieces were worn over the *hami* (loin cloth). When there was only one, it was placed in the rear, like a bustle, when two, one was worn in front and one behind. Plate LXXVI, *A* shows a shoulder ornament; *D*, a waist or shoulder ornament and *E*, a wrist band. The only knee ornament seen was of long wavy hair, like the waist ornament.

Handy gives the following native names for these ornaments: *titi ouoho*, shoulder ornament; *titi ouoho kei*, waist ornament; *poi ima*, arm ornaments; *motutu ouoho*, wrist ornaments; *poi taivai*, leg ornaments.

BELTS AND ANKLE ORNAMENTS

Edge-Partington (20, p. 48) figures a belt of seven parallel rows of bird bone beads, strung on sennit. Some of the beads are decorated with diagonal incised lines. 301 237

In Hiva Oa, at least, bands of feather work were sometimes worn around the ankles in place of hair ornaments. No examples of these have been preserved and the information about them is unsatisfactory. They are said to have been made of short black roosters' feathers attached to a broad fiber band. To judge from other feather ornaments they were probably laid on overlapping and pasted to the base.

FINGER ORNAMENTS

Ornaments made from the long tail feathers of the tropic bird were worn by male and female dancers on the second finger of both hands. The ornament

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was made by wrapping the lower ends of the feathers with sennit or inserting them in a short bone cylinder. A sennit loop attached to the ornament was slipped over the finger. (See Pl. LXXVI, *C*.) Dordillon translates the word *kihi* as "ornament of white bear for the fingers." True finger rings seem to have been unknown in ancient times.

BRACELETS AND ARM ORNAMENTS

The Marquesan shell bracelets are of considerable interest in view of the wide distribution of such ornaments in Melanesia and their comparative rarity in Polynesia. Two examples are shown on Plate LXXVI, *B*. The broader of these is made from the end of a large Conus shell of some sort and is rather crudely finished. The narrower has apparently been ground from Tridacna shell, and is unusually well made. As Tridacna shells of suitable size are lacking or at least very rare in the Marquesas it seems probable that this bracelet was an importation.

In the Peabody Museum at Salem are some very interesting wrist ornaments which were collected during the early nineteenth century. They are of types which have been forgotten by the present natives and the locality in which they were obtained is unknown. Two of these ornaments (Pl. LXXVI, *F*) are made from large blue black seeds, about the size of a small grape, which are attached to a band of plaited coconut fiber identical with that used for hair ornaments. Each seed is punctured at the stem end and attached to a cord of twisted fiber, which is held in place by a small wooden plug. The other ends of these cords are plaited into the band.

A still more showy wrist ornament is composed of strings of *Abrus precatorius* seeds. The fiber base is like that used in the ornaments just described, but the seeds are pierced and strung on loops of fine cord whose ends are woven into the band. (Pl. LXXVI, *G*.)

NECKLACES

Necklaces made of a great number of strands of braided human hair were formerly worn by men in the Marquesas. These necklaces, called by Dordillon *takiouoho*, are rare, but there is a very fine specimen in the Peabody Museum at Cambridge and four less perfect ones are in the Peabody Museum at Salem. (See Pl. LXXVII, 1, *A*.) In one specimen (2) the strands of hair seem to have run around the neck continuously; in the others the strands were made into a thick bundle with the ends wrapped with many turns of fine sennit or human hair string. One end of specimen No. 1 is wrapped in such a way that it forms a compact blunt point and the other end is finished with a sort of corrugated cylinder large enough to admit this point. When worn, the pointed end was evi-

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301 321 orated with a series of closely spaced notches which in one specimen (Pl. LXXVIII, *B*) gives the edge of the shell a toothed appearance. Along the upper margin two or more holes for suspension were made. Shell plaques of this sort seem to have been intended primarily for wear with the necklaces of plaited hair.

Plaques ground from the large end of a species of Conus shell were also used as breast ornaments, but they seem to have been much less common than those of pearl shell.

These plaques were smoothly ground on both sides, the marks of the whorls being almost obliterated. A hole for suspension was drilled near one edge; a few plaques have two holes, drilled opposite each other. These plaques appear to have been worn suspended from necklaces, but no complete specimens were seen. Their occurrence in the Marquesas is of considerable ethnological interest as such ornaments are rare or lacking in other parts of Polynesia but are highly developed in Micronesia.

301 237 Two curious objects of featherwork, one in the Peabody Museum at Salem, the other in the Peabody Museum at Cambridge, are probably to be classed as gorgets. (See Pl. LXXXVIII, *C*, 1.)

These gorgets are made from glossy black cocks' feathers cut to length, those on the upper edge being quite short and those on the lower edge measuring three inches or more. The feathers are laid on in regular overlapping tiers, beginning at one end of the crescent. The exact method of attachment could not be determined, but the feathers seem to have been pasted to a pad of tapa or other soft material in rows and further reinforced by single strands of banana fiber wrapped around the base of each row. The suspension cords are of plaited fau bark. The attachment of the cord at one end is covered by the natural slope of the feathers; the other end is concealed by a sleeve of fine sennit decorated with human hair cord applied in a wrap weave. At the bottom of this sleeve are traces of a band of green and yellow feathers. The dimensions are: length across tips, 9½ inches; maximum width, 2¾ inches; thickness, 1¼ inches.

301 An ornament of large seeds, now in the Peabody Museum at Cambridge, should probably be classed as a gorget, although its construction suggests that of the hair ornaments. The seeds are black and as large as grapes. They are perforated at the stem end and attached to cords of twisted coconut fiber by the method used for seed armlets. They differ, however, in having two seeds attached side by side to the end of each strand. These strands are attached to a band identical with that used in hair ornaments. To either end of this band are fastened long cords of twisted fau bark.

[824] The most characteristic of the Marquesan breast ornaments are the large collars, or gorgets, made from light wood and encrusted with the seeds of the *Abrus precatorius*. One of relatively simple form is shown on Plate LXXVIII, *C*, 2. The base of this ornament is a crescent of soft light wood, cut in a single piece. One side of this crescent was coated with soft breadfruit gum, then covered with the shiny red and black Abrus seeds. Along either side of the encrusted space are glued flat ribbons plaited from strings of white tapa and blackened fau bark. The ends of these ribbons are plaited together to form the

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EAR ORNAMENTS WORN BY MEN OR WOMEN

301 The pair of very simple ear ornaments shown on Plate LXXIX, *D* are made from heavy white shell, probably the lip of the Tridacna. One end is carved in imitation of the caps on women's ear ornaments of the *taiana* type. The remainder of the ornament is a simple spur, which, in one specimen, is perforated about midway between the base of the large end and the tip. It has been suggested that these objects were used to keep open freshly perforated holes in the ears.

A number of ear ornaments which appear to be intermediate between the *taiana* and *haakai* types have been preserved. Certain specimens in the American Museum of Natural History are shaped and carved like the spurs of the *haakai*, but are provided at the forward ends with shell caps identical with those used on the *taiana*. A specimen in the Peabody Museum of Harvard University resembles still more closely the spur of a *haakai*. It is made of whale ivory, and has a tiki figure in high relief carved on one side and two smaller figures on the tip. The inner end is blunt and irregular, but there are no indications that it has ever been attached to a disc. It was probably fitted with a shell cap. A specimen in the American Museum of Natural History seems to be a modification of the *haakai* type, but is made from shell. The forward end is worked into a disc considerably larger than the usual shell cap, while the spur is carved with a tiki figure in high relief.

COMPARISON

301 171 The only Marquesan ear ornament for which there is any parallel in the Pacific is that made from tortoise shell, porpoise teeth and beads. This ornament bears some slight resemblance to those worn on the Island of Yap, of which Furness (74, p. 62) says:

> [This] ear ornament is a piece of thin tortoise shell, about a third of an inch wide, bent in the form of a "U"; this is hooked in the lobe of the ear and from the outer ends are suspended little strings of beads.

The more typical Marquesan ornaments of bone, shell and ivory are unlike those used in any other part of Oceania, and must be considered as a local development. The peculiar practice of placing the most highly decorated part of the ornament behind the ear, where it can be seen only on side view, is almost unique.

HEADDRESSES

292 237 A great variety of headdresses were used by the Marquesans. In Nuku Hiva at least the most important of these appears to have been a crest of black cocks' plumes, called *taavaha* or *taavaha pepane* (Handy). A well preserved

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ornament of this sort, now in the Peabody Museum of Salem, is shown on Plate LXXX, *A*, 2.

The ornament consists of two feathered bands, of identical construction, placed side by side and fastened together by wrappings of sennit at intervals of three or four inches. The ends of the bands are enclosed in a longer wrapping; each band consists of a heavy core of twisted coconut fiber over which there is a continuous sennit wrapping. The plumes are closely spaced and have been laid on with their quills against the core, each quill being held in place by two or three turns of the wrapping. Great care was taken to place the plumes so that their natural curve caused those on each half of the band to incline outward and away from the center. Heavy sennit cords, probably a continuation of the fiber in the cores of the bands, spring from either end of the ornament. Other cords of fau bark are attached to the ends of the sennit cords.

The *taovaha* was worn across the forward part of the head, a little back of the forehead, with the plumes rising vertically. The cords at its ends were tied under the chin, like bonnet strings. It was primarily a man's ornament, but was sometimes worn by women dancers at fetes.

Gracia (28, p. 134) says that about 500 feathers were required for a *taovaha*, and that each cock had only two feathers which would serve, so that it was necessary to despoil over 200 cocks to make a single ornament. At the time of his visit a *taovaha* was valued at a gun.

A modified form of the *taovaha* is shown on Plate LXXX, *A*, 1. The bands which form the base of this ornament are like those in the one just described, but the workmanship is not so good. The feathers are much shorter and appear to be cocks' tail coverts. They are made up in small bunches of three to five feathers each, with the quill ends enclosed in short sennit wrappings. The bunches are attached to the cores of the bands by a method resembling that used in attaching the small locks of hair in hair ornaments.

Stewart (59, pp. 247-249) describes still another modification of the *taavaha*. He says:

It [the headdress] consists of a crescent three or four inches broad at its greatest breadth, fixed uprightly in front, the lower edge following the line of the hair on the forehead, and the points terminating at each temple immediately above the ears. A neat border, an eighth of an inch wide, ran around the edges in a herring bone pattern of alternate black and white—while the middle was entirely filled with the small scarlet berries of the *Abrus precatorius*, fastened upon the material of which it was constructed by a gum which exudes from the breadfruit tree. [Compare this description with the gorget (?) shown on Pl. LXXVIII, *C*, 2.] The crescent formed the front of a cap, fitting closely to the head behind, and the foundation in which the heavy plumage surmounting it is fixed. This plumage consisted of the long black and burnished tail feathers of the cock—the finest I ever saw; those in the center being more than two feet in length. They were arranged behind the front piece as closely as possible, and in such a manner, as to form the shape of a deeply pointed chapeau, placed crosswise on the head—the feathers in the center standing perpendicular, and becoming more and more vertical, till the lowest at the edges drooped deeply over the shoulders. The ends—falling, from the highest point above the forehead, one over another in a regularly defined curve on either side—played in the air with the gracefulness of an ostrich plume, and imparted to the whole an appearance of richness and taste we had not been led to expect from any of the decorations of the country previously seen.

According to Handy a headdress made from the white feathers of the *tuhi* bird was also called *taovaha*.

Gracia (28, p. 134) says: "Oftentimes a bunch of other more curious feathers of sea birds, in the form of a plume, are worn at the top or back of the

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292 head in addition to the large *taatvaha*." This probably refers to ornaments of the
297 same general type as that shown on Plate LXXX, *A*, 3, which were made of unusually long tail feathers of the tropic bird attached to a smooth stick by wrappings of fine sennit. The principle of attachment appears to be much the same as that used in the large *taatvaha* except that the plumes entirely surround the stick instead of running only along one side of the band. The lower end of the carefully smoothed stick projects for some distance, suggesting that the ornament was thrust into a coil of hair.

Perhaps the most beautiful of the Marquesan headdresses was the *packua*, shown on Plate LXXX, *B*. Only two of these ornaments were seen, but these agree so closely in all details of construction and decoration as to suggest that the type was a fixed one. It is rather interesting that one of the specimens contains a few peacock feathers, proving it to be post-European.

The body of the *packua* is made up of three strips of featherwork. Each strip is broadest in the middle and tapers to a point at either end. A piece of large bamboo, flattened and scraped to paper thinness serves as a base for the featherwork. Over this are laid one or more layers of fine white tapa, which fit the bamboo so closely as to suggest that they were put on while the tapa was wet. The feathers, all of which are small, are glued to this tapa with breadfruit gum. To give additional security the whole strip is wrapped with single strands of some stiff white fiber—probably banana fiber. In a perfect specimen these wrappings are concealed by the feathers, but in the one figured the wrappings, tapa pad, and bamboo base are all visible. The feathers are laid on in irregular overlapping rows, the work progressing from both ends and meeting in the middle.

The tapa pad varies in thickness in the different strips composing the ornament, being heaviest in the top and bottom strips, less heavy on the ends of the central strip, and thinnest at the center of the central strip.

The three strips are pasted side by side upon a single large piece of coconut leaf sheath, whose natural stiffness serves to hold the ornament in shape. Along either edge, outside the strips, run three flat bands, or ribbons, plaited from strands of black dyed fau bark and white tapa. At either end of the ornament, between these bands, is a small triangular piece of white tapa which serves to cover the tips of the strips of feather work. Long tying strips, braided from tapa and black fau bark, are attached to either end of the ornament. In the specimen figured two tapa strings are fastened to the inside near the top center, suggesting that there was originally an additional ornament which projected above the *packua*.

Green, yellow and red feathers were used. The first two colors were obtained from a species of dove, the *kuku*. The source of the red feathers is doubtful. The usual native story is that they were obtained from the *manu kua*, a red bird long extinct, which lived on the plateaus of Nuku Hiva and Hiva Oa. In an account obtained in Pua Ma'u, Hiva Oa, they are said to have been brought from a far off island called Aotona, which Handy identifies as Rarotonga. A species of *kuku* which has a red cap of the same shade as the feathers in the *packua* occurs in Hiva Oa, and it seems probable that at least some of the feathers used were obtained from these birds. (It should be noted that Dordillon defines *packua* as "head ornament of *kuku* feathers.")

The red, green and yellow feathers on each strip were arranged in vertical bands, the center of the middle strip being covered by a large block of red feathers. Two small designs in red, one of which appears in the illustration, were placed on either side of the centers of the outer strips.

The *packua* is said to have been the ancient headdress of Nuku Hiva and also of the valley of Pua Ma'u in Hiva Oa. It is not mentioned by any of the early writers, however, and

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probably was always a rare and greatly valued ornament. A narrow band of featherwork, corresponding to one of the three strips in the large *paekua*, was worn as a headdress in Nuku Hiva. It was also called *paekuu*. 292 237

According to Handy the *paekua* was worn by young chiefesses at fetes, and was also sometimes worn as a breast ornament. Its principal use, however, was as a man's headdress.

A few other types of feather headdresses seem to have been in use. Forster (25, pp. 15-16) says that some of the natives of Hiva Oa wore "round coronets of the small linguated feathers of the man-of-war bird." Stewart (59, p. 313) says that a *tuua* (priest) seen by him in Nuku Hiva wore "a full wreath of red and white feathers, much soiled, in alternate bunches over the forehead and temples." From his notes and from Dordillon's dictionary Handy has compiled names of additional feather ornaments as follows:

Heikua: A wreath of red cock feathers worn by women to dance the *hakapahaka*. The feathers were attached to sennit.

T'ua: An ornament of twelve upright *toake* feathers, which was worn on the forehead.

Hei mekameka: Head ornament of long cocks' plumes.

Kohepea: Long cocks' plumes attached to the end of a stick, worn as an ornament.

Koketata: Aigrette of cocks' plumes on the end of a stick.

Pea: Long tail feathers of a cock. Aigrette of these feathers.

Peue: Head ornament of feathers in the form of a visor.

Tua: Aigrette of red feathers of the tropic bird.

A number of striking headdresses of materials other than feathers were also used by the Marquesans. 292 237 321

Wreaths or garlands of porpoise teeth (*peue ei*), worn principally by women, are still obtainable, although their manufacture has been discontinued for a number of years. The base of these ornaments is a band plaited from a number of strands of twisted coconut fiber. (See Pl. LXXXII, *A*.) The technique is identical with that employed for the bands of hair ornaments. The band is widest in the middle and tapers toward the ends, which are turned over and plaited back into the band on the outer side, forming stiff loops. Through these loops the tying strings, usually of white tape, are passed.

The teeth were drilled through the root, and were attached as follows: A small bundle of fibers was released from every other cord on one half of the plait, threaded with beads and teeth, and its free end twisted into the corresponding cord on the opposite half of the plait. In almost all specimens both teeth and beads are used, each of the loops having six or more beads at each end and from 10 to 15 teeth in the middle. According to one informant, in ancient times small fish vertebrae were used instead of beads. In one specimen the beads are absent, the entire loop being threaded with teeth. It is evident that the twisting of the cords in the plait, the stringing of the loops, and the plaiting were carried on simultaneously.

In all the specimens examined, the teeth had apparently been drilled with metal tools. The perforations are remarkably small, and the teeth fit the cords on which they are strung so tightly that it is difficult to remove them even when the cords have been broken. Most, if not all, of the teeth used in these wreaths were obtained from the island of Ua Pou. An ordinary wreath contains from 1000 to 1500 teeth, and the demand evidently exceeded the supply, for several wreaths were seen which contained imitation teeth made of bone. A unique specimen, made entirely of bone, is shown on Plate LXXXII, *B*.

When not in use the wreath was straightened and a smooth rod, about half an inch in diameter was run through all the loops, between the teeth and the plaited band. The orna-

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ment was thus held rigid, reducing the danger of breakage. It was then rolled in several thicknesses of tapa. When the teeth in a wreath had become yellow or dirty they were scoured with fine sand.

A curious type of headdress (*paekaha*) is shown on Plate LXXXI, *A*. Its manufacture appears to have been limited to Hiva Oa, Tau Ata and Fatu Hiva. It apparently was not made in Ua Pou (Handy) nor in Nuku Hiva, although ornaments of this sort, obtained in trade, were sometimes worn in Nuku Hiva during the early historic period. Some informants of Hiva Oa say that it was not worn in Hiva Oa in ancient times, and ascribe it to Fatu Hiva.

The *paekaha* consists of a number of plaques of shell and tortoise shell which are attached to a band of woven coconut fiber. The warp strands run longitudinally, the weft strands passing back and forth across the band in a wrap weave. The direction of the wrapping is changed at regular intervals, producing an ornamental banded effect. The edges of the band are re-inforced by cords somewhat heavier than the regular warp strands, and its ends are finished in stiff loops. The form and weaving of the band is shown on Plate LXXXI, *C*. The outer surface of the band was originally covered with small discs of mother of pearl about the size of shirt buttons. A small toothed disc of tortoise shell was fastened to the center of each pearl disc. Machine made buttons of china and shell were introduced [177] by the traders at an early time, and soon supplanted the old pearl discs on these headdresses. The ends of the band were covered by pearl shell plates, overlaid with thin openwork strips of tortoise shell. The form and ordinary design of these plates can be seen on Plate LXXXI, *A*. The end plates were called *kana*, the small discs *kana momo* (Handy).

The plaques, which form the principle part of the ornament, were fastened to the lower edge of the band. There seems to have been no fixed rule as to the number of plaques, but more than seven tortoise shell and eight shell plaques were rarely employed. They were attached to the band by coconut fibers passed through small holes drilled at their tops, and were fastened together near the lower ends in the same way. The shell plaques were made from large conch or Triton shells, and were highly polished on all surfaces. They were made from the lower end of the shell and preserved its natural curve. The tortoise shell plaques were two or three times as wide as the shell plaques, and were elaborately carved. The decoration usually consisted of a large highly conventialized human figure in the center, with panels of superposed smaller figures or designs on either side. A narrow band of designs ran across the lower end. The spaces on each side of the head of the large central figure were pierced. In a few specimens the central figure was replaced by two smaller figures, but the examples shown on Plate LXXXI, *A*, *B* may be taken as typical. The most curious feature of this decoration is that, when the ornament was on the head, the figures were all upside down. This lends some support to the statement of one informant that the *paekaha* was originally worn with the plaques above instead of below the band, although all natives agree that in historic times it was worn with the plaques inverted.

The tortoise shell plaques were bent outward at the bottom, their curve conforming roughly to that of the shell plaques. When the ornament was on the head the lower edge flared outward over the eyes, like the visor of a cap. Many of the tortoise shell plaques are perforated at the lower edge, suggesting that small ornaments were suspended from them. An ornament of white beard (*pavakina*) was usually attached to the center of the *paekaha* band and projected above it.

The materials used in the *paekaha* were all obtained locally. Two varieties of tortoise shell bearing turtles were distinguished by the natives, the shell of one species being thick and easily worked, and that of the other thin and brittle. No method of cementing the plates together seems to have been known, and the way in which the tortoise shell plaques were bent has been forgotten. Tortoise shell was highly valued by the natives, and the white traders [177] met the demand by importing brown sheet celluloid. Many of the *paekaha* in American col-

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lections are of celluloid and the carving on such objects is often superior to that on those of genuine tortoise shell. There are indications that the traders went even further in the *packaha* trade, for the plaques in a specimen seen in Pua Ma'u, Hiva Oa, seem to have been stamped in a mold. The material used was apparently vulcanized rubber. 292 237 321

Packaha were made by special *tahuna*, and according to Handy were paid for in pigs. Land was not legal tender in this case, because the *packaha* was worn on the head, and if a woman walked on the land given in payment it would be as though she stepped over the head of the owner of the *packaha*, a great defilement. The holes in the plaques were made with a pump drill and the carvings executed, in ancient times, with rats' teeth. [436] [784]

Packaha were worn by both men and women and in view of the large number preserved in collections it is rather curious that neither Cook nor Fleurieu mention them in their accounts of the southern islands although they speak of other headdresses for whose existence we have little other evidence. This would seem to strengthen the evidence for their Fatu Hivan origin, and it seems probable that they became popular in the other islands of the group only in historic times.

In contrast to this silence in regard to the *packaha* we have an abundance of early references to another sort of shell and tortoise shell headdress, the *uhihana* (Handy). Cook says (14, p. 309-310):

> Their principle headdress, and what appears to be their chief ornament, is a sort of broad fillet, curiously made of the fibers of the husks of coconuts. In the front is fixed a mother of pearl shell wrought round to the size of a tea saucer. Before that another, smaller, of very fine tortoise shell, and perforated in curious figures. Also before and in the center of that, is another round piece of mother of pearl, about the size of half a crown, and before this another piece of perforated tortoise shell the size of a shilling. Beside this decoration in front, some have it also on each side, but in smaller pieces; and all have fixed to them the tail feathers of cocks or tropic birds, which, when the fillet is tied on, stand upright; so that the whole together makes a very sightly ornament.

Plate LXXXI, *C* shows the back of one of these ornaments and the inside of the head band. The bands were plaited in the same way as those of the *packaha*. The pearl shell, of the largest size available, was ground to a regular outline and drilled near the center with two or more holes for attachment.

A very fine specimen, now in the Peabody Museum of Salem, is shown on Plate LXXXII, *C*. The final disc of tortoise shell is missing—possibly it was never there. The design on the large tortoise shell disc is of the same general type as that illustrated by Cook (14, p. 310). There are indications that two distinct conventions were employed in the carving of these discs.

> One convention was characterized by a round disc with elaborate tracery, and an absence of human figures. In the other the disc was oval and from the top center rose two large hooks, with their tips pointing outward. Radiating from the center of the oval were six rather large tiki heads, with the spaces between cut away. Bordering the oval, and joining the tops of the heads, was a continuous band, toothed on the outer edge and delicately pierced and traced. *Uhihana*, in which the oval discs were used, seem usually to have had the ends of the bands covered with plates of mother of pearl and tortoise shell like those used on *packas*. Those with round discs lacked the plates. It seems probable that these conventions represent local

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292 237 variations, but we have no data as to the locality from which the examples in American museums were collected.

321 The construction of the feather ornaments attached to the *uhikana* is clearly shown in Plate LXXXI, *C*.

The base of the ornament is a straight stick 8 to 10 inches long, and about ½ an inch thick at the bottom and tapering to ¼ inch at the top. This is flattened on the sides. The feathers are laid on with their quills resting against the flat sides, and are held in place by a continuous wrapping of sennit, the work progressing from the top downward. The technique is thus essentially the same as that used in the *taeuha*. The lower ends of the ornaments are inserted between the shell and the band, and attached to the band by loops of sennit.

The *uhikana* was essentially a man's headdress, but does not seem to have been tapu to women. It was worn principally by warriors and dancers, and seems to have been used in all the islands of the group.

A sennit and pearl shell ornament of different type is preserved in the Peabody Museum of Harvard University. The nacre is in the form of small pear-shaped ovals, which are fastened point down upon a sennit band. The band appears to be plaited, and is certainly not woven as are the bands of *paekaha* and *uhikana*.

292 A peculiar object, probably a headdress, is shown on Plate LXXXII, *D*. It is made from small cords of twisted coconut fiber, and consists of a woven band from which hangs three rows of broad flat fringe.

Edge-Partington (20, p. 47) illustrates a head ornament consisting of a sennit band which bears, in the center of the front, a grotesque head, also woven of sennit, with nacre eyes and pointed teeth.

A few other headdresses are mentioned by early writers. Forster (25, pp. 15-16) says:

"Some were . . . . a circle from which several ranges of twisted strings of coconut coir about two inches long, either of the natural color or dyed black diverged round the head." Krusenstern (34, pp. 158-159) mentions a headdress made of "a ring of soft wood, from which a row of strings is suspended." An informant in Hiva Oa said that a string headdress called *paeha'a* was used in ancient times, but could give no details of its form. It seems probable that it belonged to one of the types already mentioned.

Fleurieu (23, p. 113) says: "They wear a sort of helmet visor covered with white fabric on which different figures are painted in black."

Aigrettes made from old men's beards were frequently worn with the *pene ei* and *paekaha*, and probably with other ornaments as well. They were called *paeuhiua*. They seem to have been used in all the islands of the group, and [302] are represented in most museum collections. The beards were usually those of old male relatives, but an old man who was not a relative might be paid to let his beard grow for the purpose. The owner of such an ornament can usually give

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COMPARATIVE TABLE MATERIAL CULTURE—Continued

DRESS AND ORNAMENT

	Marquesas	New Zealand	Hawaii	Society Islands	Samoa	Tonga
Tattooing	Men completely tattooed; women on legs, arms and lips	Men tattooed on face and thighs, body tattoo rare; women on lips and chin	Men sometimes completely tattooed except face	Men tattooed on body and limbs but not on face; women on lower leg and arms, also a girdle	Men tattooed waist to knee; women on arms and legs	Like Samoa
Tapa making	Stone, hollow wooden and solid wooden anvils; square and round beaters, grooved but no water marks	Obsolete, no data on manufacture	Hollow wooden anvil, square and round beater, beaters with water marks or grooves	Hollow wooden anvil; square beater with water marks on one or two sides, other sides grooved	Smooth log, not hollowed, square beater, grooved on three sides, no water marks	Like Samoa
Tapa decoration	Dyed yellow	———	Painted, stamped with bamboo stamps or flowers (rare)	Free hand painting, stamped with flowers or leaves	Free hand painting and painting over carved block	Free hand painting and painting over carved block
Feather work	Feathers pasted on base; no feather cloaks	Feathers caught into woven fabric; feather cloaks important	Feathers caught into netted fabric; feather cloaks important	Feathers caught into netted fabric; no feather cloaks	Woven in edges of fine mats	No data
Necklaces of many strands of braided hair	Important	Not used	Important, part of chief's insignia	Turban of many strands of braided hair, no necklaces	Not used	Not used
Fans	Highly decorated, carried by chiefs	No data	Highly decorated fans sometimes used by chiefs	Elaborate but not ceremonial	Elaborate but not ceremonial	Elaborate but not ceremonial
Fly flap	Not used	Not used	Elaborately decorated feather flaps part of chief's insignia	Elaborately carved, ceremonial (?)	Carried by speaker chiefs	Common, ceremonial (?)

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plus the food and labor that his care had involved. His importance was ceremonial rather than practical. These animals were considered essential to all rites of adoption, marriages, funerals, and various other feasts. The place which the head of a household achieved in the next world was directly dependent upon the number of pigs which were sacrificed at the commemorative ceremonies held for him some time after his death.

Chickens were of little economic importance. Eggs were never eaten; the fowl themselves served as food only occasionally, and were never included in the menu at important feasts. Cocks were valued chiefly for their iridescent feathers, which were used for headdresses and much prized.

Fishing was the main source of flesh food and was highly organized on a common basis. Each tribe had its sacred place for fishermen with a shrine and a master fisherman, who was also a priest. His duties included proper care of the fishing gear and images, and the keeping of the taboos which surrounded the fishermen during their time of service. At this period the men lived in a sacred enclosure which women were forbidden to enter, and no man could have contact with women or with anything made by women during this time.

The fishing canoes were individually owned, but the catch was divided on communal lines. The first fish were set aside for the fisherman-priest and the special gods; after that, what remained was prorated among the population. Shell-fishing could be engaged in by anyone at any time, but big fishing was always communal. Single canoes were warned against going out alone, for some fishing banks were ten or twenty miles from land, and a single canoe could easily be cut off by enemies. Most of the fishing was done with giant nets which were let down between the boats. The big fish, rays, shark, etc., were harpooned and were an important article of diet, although the flesh of the rays was so strong that it had to be hung up for days before it could be eaten. Turtles were highly valued and, for sacrificial purposes, were considered equivalent to a human captive.